

An Introduction to Natural Resource Damage Assessment and Restoration

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Natural Resource Damage Assessment

- Separate CERCLA process that usually is not initiated until after the remedy decision has been made
- Evaluates injury to & loss of service from natural resources
- Conducted by “trustees” on behalf of the public (usually federal & state agencies/tribes)
- Damages are the dollar amount needed to restore, replace or acquire the equivalent of the natural resources injured or the services lost

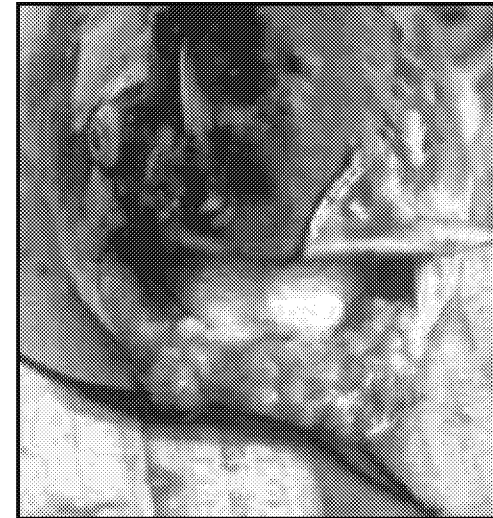
What Are Natural Resource Injuries?



Measureable adverse change in quality or viability of the natural resource from exposure

Examples include:

- Death
- Disease
- Cancer
- Genetic Mutations
- Physiological Malfunctions
- Physical Deformities
- Behavioral Abnormalities
- Reproductive Impairment



What are Natural Resource Services?

Physical and biological functions performed by the resource including the human uses of those functions, as a result of resource quality

Examples include:

Human Use:

- Fishing
- Boating
- Hiking

Ecological:

- Nutrient cycling
- Provision of habitat
- Predator-prey interactions
- Organism viability
- Ecosystem sustainability



Natural Resource “Damages”

- The amount of money sought by the natural resource trustee as compensation for injury, destruction, or loss of natural resources
- Calculated based on injuries occurring from the onset of the release through the recovery period, less any mitigation of those injuries by response actions taken or anticipated, plus any increase in injuries that are reasonably unavoidable as a result of response actions taken or anticipated
- Includes reasonable and necessary costs of the assessment

43 C.F.R. Part 11 (NRDA regulations)

Major Steps in the NRDAR Process

1. Preassessment
2. Injury Assessment
3. Damages
Determinations
4. CERCLA Restoration
(Damages) Claim
5. Settlement or
Litigation
6. Restoration Planning
7. Restoration
Implementation
8. Monitoring

CERCLA Remedial vs. NRDAR Processes

Remedial Action:

- Cleanup to reduce or eliminate present and future threats to human health and the environment from hazardous substance releases
- Risk/ARARs-based
- May not address natural resource injury or lost services

Natural Resource Damage Assessment & Restoration:

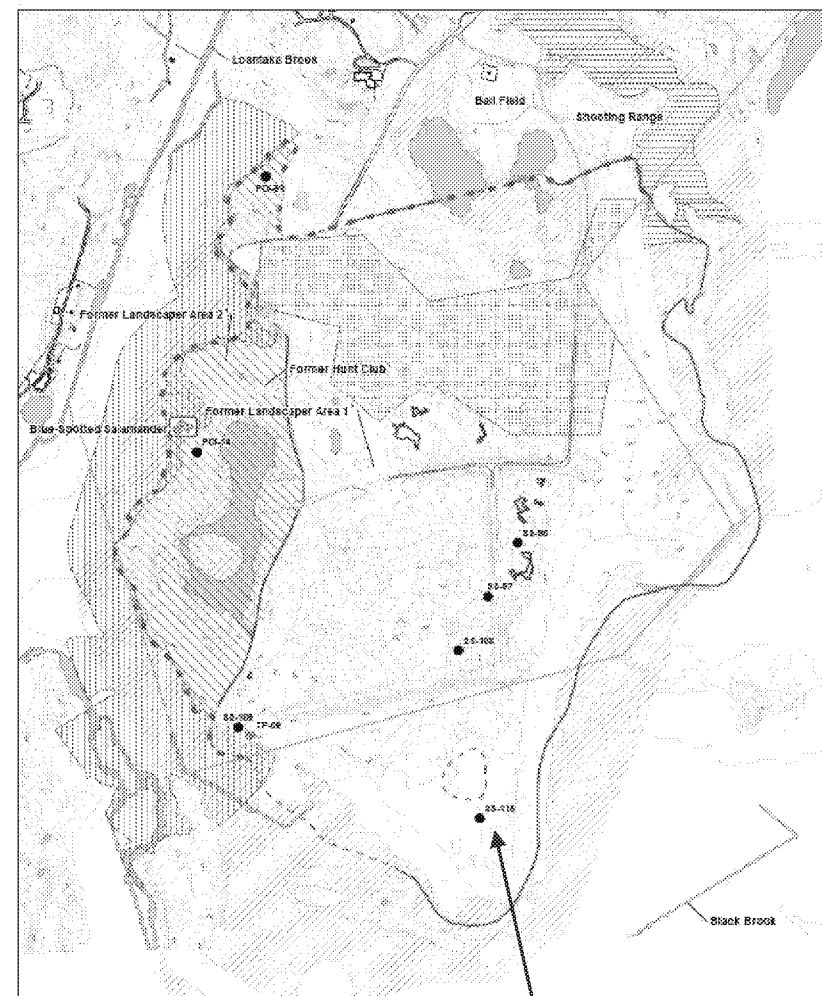
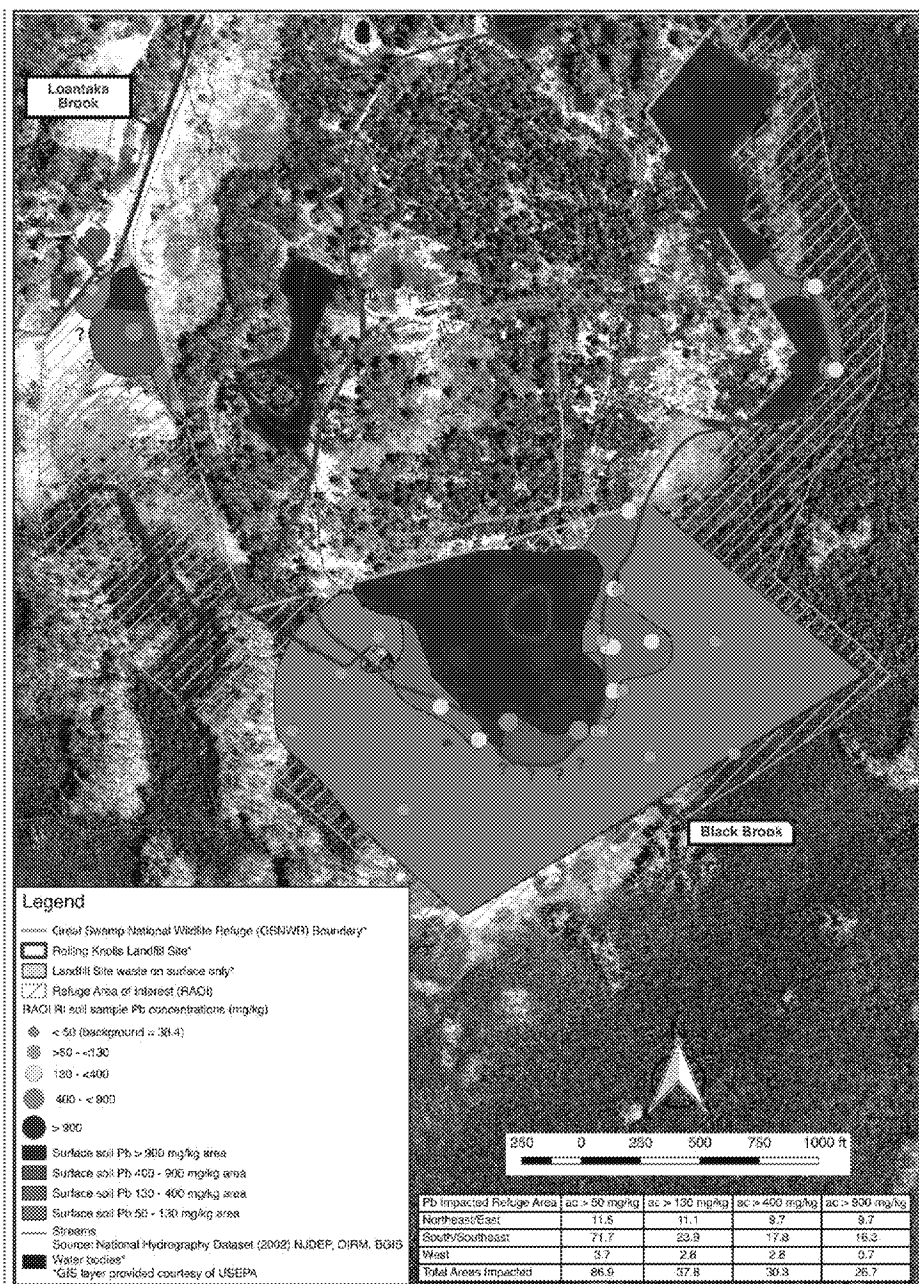
- Trustee restoration of injured natural resources
- Compensation for public's lost uses of the natural resources
- Injury/loss-based
- Does not address human health

Rolling Knolls Landfill Remedial Process

- Remedial action selected will have significant implications for NRDA
- Lead, PCBs and other hazardous substances on the portion of the landfill within the Refuge wilderness area pose unacceptable risks to recreational users and wildlife
- Hazardous substances have migrated into the shallow groundwater that flows into the Refuge and will likely continue to do so
- Shallow groundwater at the site is hydrologically connected to the surface water in the Refuge
- New Jersey's landfill closure and soil remediation laws are ARARs

Rolling Knolls Landfill Remedial Process

- A remedy that does not fully contain/cap the landfill waste will not protect the Refuge wilderness area or comply with ARARs
- A remedy that includes the components recommended by USFWS and properly closes this legacy landfill consistent with Federal and State ARARs would:
 - ✓ Protect future recreational users
 - ✓ Prevent future injury to natural resources
 - ✓ Significantly improve both wetland and upland wildlife habitat
 - ✓ Mitigate current and past natural resource injuries, and
 - ✓ Be the fastest and most cost-effective way to return this site to a community asset



Proposed Cleanup in Refuge
Draft FS Remedial Alternatives 3 & 4

Refuge Area at Risk